

### **IN THE DRAWINGS**

Corrected drawings are supplied herewith, each sheet identified as “REPLACEMENT SHEET” or “NEW SHEET,” as required.

Applicant has added section line 9-9 to FIG. 1.

Applicant has added section line 10-10 to FIG. 4.

Applicant has added FIG. 9 which is a section view of the example semiconducting device shown in FIG. 1 taken along line 9-9.

Applicant has added FIG. 10 which is a section view of the example semiconducting device shown in FIG. 4 taken along line 10-10.

### **REMARKS**

This paper responds to the Office Action mailed on February 28, 2006. Claim 21 is amended such that claims 1-2, 5-7 and 21-31 are now pending in this application.

#### **Drawing Objections**

The Examiner states at page 2 of the Final Office Action that:

“The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the following must be shown or the feature(s) canceled from the claim(s): a) at least one of the contacts is on three sides of the first die (See Claim 24); b) at least one of the contacts is on each side of the first die (See Claim 25); and c) a pad (See Column 21).”

#### **Claim 21**

Applicant has amended claim 21 to remove any reference to a pad.

#### **Claim 24**

Applicant has added a new FIG. 9 which shows “wherein at least one of the contacts is on three sides of the first die” as recited in claim 24.

#### **Claim 25**

Applicant has added a new FIG. 10 which shows “wherein at least one of the contacts is on each side of the first die” as recited in claim 25.

Reconsideration and allowance of claims 21, 23 and 25 are respectfully requested.

#### **§112 Rejection of the Claims**

Claim 21 was rejected under 35 USC § 112, first paragraph, as failing to comply with the written description requirement. The Examiner states at page 3 of the Final Office Action that:

“The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed

invention. The Applicant has claimed that the contact is formed of a solder column and a pad. However, this is not disclosed. The only thing that is disclosed is the use of a solder column (For Example: See Page 5 Line 5)."

As discussed above, Applicant has amended claim 21 to remove any reference to a pad.

Reconsideration and allowance of claim 21 are respectfully requested.

§102 Rejection of the Claims

Claims 1, 5, 22 and 23 were rejected under 35 USC § 102(e) as being anticipated by Damberg (U.S. 2004/0021211).

Claim 1

As part of making the rejection of claim 1, the Examiner states at pages 3-4 of the Final Office Action that "In regards to claim 1, Damberg discloses the following: . . . a contact (42) attached to the first surface of the interposer the first section and the second section (For Example: See Figure 4)." Applicant respectfully traverses this assertion because the contact 42 cited by the Examiner is not attached to the first surface of the interposer.

Applicant notes that the contact 42 in Damberg is attached to the second surface and not the first surface of the interposer. Applicant respectfully directs that Examiner's attention to Figure 4 of Damberg which shows that the second and third microelements 78, 80 (i.e., the second chip) are mounted to the same surface (i.e., the second surface) as the traces 42.

Therefore, traces 42 are NOT attached to the first surface of the interposer (i.e., the surface of the interposer that engages the first chip). Since traces 42 are NOT attached to the first surface of the interposer, Damberg does not teach or suggest "a contact attached to the first surface of the interposer at the first section and the second section" as recited in claim 1. Applicant respectfully requests that Examiner cite with more clarity where the elements of claim 1 are found in Damberg.

### Claim 5

As part of making the rejection of claim 5, the Examiner states at page 4 of the Final Office Action that “In regards to claim 5, Damberg discloses the following: . . . a plurality of contacts that are each attached to the first surface of the interposer at the first section and the second section (For Example: See Paragraph 31) (Note: The contact (44) is made of more than one layer. Therefore, there are a plurality of contacts.)” Applicant respectfully traverses this assertion in part because the reference numeral 44 in Damberg refers to a first microelectric element instead of a contact.

Applicant also respectfully traverses this assertion in part because Applicant can not find any description in Damberg as to any conductors that are attached to the first surface of the interposer 20. Applicant notes that all of contacts disclosed in Damberg appear to be attached to the second surface of the interposer (i.e., the same surface of the interposer that is engaged by the second chip) and not the first surface. Applicant respectfully directs that Examiner’s attention to Figures 1-4 and paragraphs 30-31 of Damberg which illustrate that the traces 42 are on the second surface of the interposer and not the first surface. Since traces 42 are NOT attached to the first surface of the interposer, Damberg does not teach or suggest “a plurality of contacts that are each attached to the first surface of the interposer at the first section and the second section” as recited in claim 5. Applicant respectfully requests that Examiner cite with more clarity where the elements of claim 5 are found in Damberg.

### Claim 22

As part of making the rejection of claim 22, the Examiner states at page 4 of the Final Office Action that “In regards to claim 22, Damberg discloses the following: . . . the contact extends between two different portions of the first surface (For Example: See Figure 4).” Applicant respectfully traverses this assertion because as discussed above, Applicant can not find any description in Damberg as to any conductors that are attached to the first surface of the interposer 20.

Applicant again notes that all of contacts disclosed in Damberg appear to be attached to the second surface (i.e., the same surface as the second chip) and not the first surface. Therefore,

Applicant can not see how the contacts would extend between different portions of the first surface. Applicant respectfully submits that Damberg does not teach or suggest “wherein the contact extends between two different portions of the first surface” as recited in claim 22. Applicant respectfully requests that the Examiner cite with more clarity where the elements of claim 22 are found in Damberg.

#### Claim 23

As part of making the rejection of claim 23, the Examiner states at page 4 of the Final Office Action that “In regards to claim 23, Damberg discloses the following: . . . at least one of the contacts is on one side of the first die and at least one other of the contacts is on an opposing side of the first die (For Example: See Figure 4).” Applicant respectfully traverses this assertion because as discussed above, Applicant can not find any description in Damberg as to any conductors that are attached to the first surface of the interposer 20 much less a plurality of conductors that are attached to the first surface of an interposer on opposing sides of the first die. Therefore, Applicant respectfully submits that Damberg does not teach or suggest “wherein at least one of the contacts is on one side of the first die and at least one other of the contacts is on an opposing side of the first die” as recited in claim 23. Applicant respectfully requests that Examiner cite with more clarity where the elements of claim 23 are found in Damberg.

Reconsideration and allowance of claims 1, 5, 22 and 23 are respectfully requested.

#### Allowable Subject Matter

Claims 2, 6, 7 and 26-31 were objected to as being dependent upon a rejected base claim, but were indicated to be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### Reservation of Right to Swear Behind References

Applicant reserves the right to swear behind any references which are cited in a rejection under 35 U.S.C. §§102(a), 102(e), 103/102(a), and 103/102(e). Statements distinguishing the

claimed subject matter over the cited references are not to be interpreted as admissions that the references are prior art.

Conclusion

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicants' attorney Andrew Peret at 262-646-7009, or the below-signed attorney at 612-349-9592, to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

IWEN CHAO ET AL.

By their Representatives,  
SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.  
Attorneys for Intel Corporation  
P.O. Box 2938  
Minneapolis, Minnesota 55402  
(612) 349-9592

Date March 21, 2006

By Ann M. McCrackin  
Ann M. McCrackin  
Reg. No. 42,858

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 21 day of March 2006.

Chris Hammond  
Name

Chris Hammond  
Signature